

**DECLARATION OF DR. HOWIE GARBER**  
*UPHE v. Diesel Power Gear et al.*, 2:17-cv-00032-RJS-DBP

I, Howie Garber, M.D., declare that the following statements are true and correct to the best of my knowledge.

1. I am a resident of Salt Lake County, Utah, and a Board member of Utah Physicians for a Healthy Environment (UPHE). I have been a practicing *emergency* physician since 1983. I joined the volunteer executive Board of UPHE in 2010. Prior to joining the UPHE Board I had been a UPHE member since 2007. UPHE represents my interests in a healthy environment, including healthy air.

2. I am harmed by air pollution in the Wasatch Front by its adverse effects on my health, athletic performance and artistic expression.

3. While it has been common knowledge that air pollution could cause exacerbations of asthma and chronic obstructive pulmonary disease, I was *shocked* to find out that particulate air pollution could be responsible for a person's heart attack or stroke. In fact it has been shown that in vulnerable populations, there is a straight line correlation between the number of heart attacks and strokes on a given day and the concentration of PM<sub>2.5</sub> particulates. Of course this results in marked increases in emergency room visits with increased patient suffering and death directly attributed to particulate air pollution.

4. I am very concerned about the high levels of air pollution throughout the Wasatch Front, and what those high levels of pollution might mean to my own health. I find it unacceptable that we have made so little progress in ensuring that everyone breathes clean, healthy air. Fine particulate matter, *known at PM<sub>2.5</sub>*, is of particular concern. As explained in greater detail on UPHE's website:

Particulate pollution concentrations typical of the Wasatch Front increase mortality rates about 10% according to the formula recommended by the American Heart Association published in May, 2010. A subsequent study suggests that number should be 14%. That means between 1,000 and 2,000 Utahns die prematurely every year due to our air pollution. A recent MIT study indicates that the annual number of premature deaths in the US due to air pollution is 210,000, and that the average premature death represents a loss of ten years of life.

<http://uphe.org/air-pollution-health/cardiovascular-system/>

5. Salt Lake County's ambient air currently exceeds EPA standards due to the number of days when levels of PM<sub>2.5</sub> and ozone are unhealthy.



6. About eight years ago, I noticed that during and after one of our Wasatch Front winter inversions, my endurance and ability to climb mountains on my skis was impaired. I could only climb about 80% of the vertical that I would normally climb when the air is good. After a few days of exposure to particulate air pollution I could actually measure a 15-20% diminution of peak expiratory flow rate. I have also noticed at the health club that maximal heart rate is markedly reduced on days when particulate pollution is high. I am discouraged that my physical output is significantly harmed by air pollution.

7. Because of the health effects of particulate air pollution, I purchased a portable indoor air filter that runs in my home when particulate levels are high. When outdoor air pollution levels exceed 30 ug/m<sup>3</sup> of PM<sub>2.5</sub> I am forced to avoid all outdoor activities, including riding my road bike, due to health concerns.

8. My parallel career has been that of a professional nature photographer. Some highlights of this career have been national and international awards including four awards from the BBC. Poor air quality reduces visibility, mars the scenery and injures my ability to work. I would estimate that the clarity of my view of the Wasatch Mountains is impaired by air pollution approximately 50% of the time in the winter. This makes landscape photography in the Wasatch Front difficult or impossible on these days

9. I am familiar with some of the diesel vehicle modification activities of the defendants in this case, as described in UPHE's July 20, 2017 amended complaint.

10. I understand that the defendants have removed (and have sold parts so that others can remove) pollution control equipment from diesel vehicles, causing those vehicles to discharge more diesel exhaust into our air. Diesel vehicles already emit significant quantities of particulate matter and ozone-forming chemicals, and the Wasatch Front already has some of the worst air quality in the country. The additional diesel exhaust emitted by these modified vehicles only exacerbates the health risks to me and anyone else breathing the air in the Wasatch Front.

11. My enjoyment of Salt Lake County and the Wasatch Front would be enhanced if the defendants were ordered to stop removing pollution control equipment from diesel vehicles, and were ordered to stop operating those vehicles. The air quality of the Wasatch Front would also be enhanced if the defendants were ordered to stop selling parts designed to remove or defeat diesel vehicle pollution control equipment, and to recover all of the parts they have sold. If the defendants were also required to pay a substantial penalty that would discourage them from engaging in these activities again, and deter others from following their example.

Signed under the penalties of perjury,

Dated 8/1/17

Howard Z. Garber  
Howie Garber, M.D.